

App. No. 10/678200
Office Action Dated April 7, 2004
Amd. Dated August 9, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 1, 4, 5, 7, 10-12, 15, 16 and 18 are amended.

Listing of Claims:

1. (Currently Amended) A semiconductor device comprising a plurality of wirings having corners so that the respective parts including the corners of the wirings are formed parallel to each other with a clearance or conductive film patterns formed with a clearance between the wirings or the conductive film patterns on a semiconductor substrate,

wherein~~[[:]]~~ a protrusion is formed at a corner ~~or an end part of at least one of the wirings or the conductive film patterns~~ and the protrusion faces the clearance between the adjacent wirings.

2. (Original) The semiconductor device according to claim 1, wherein the protrusion protrudes outward from the corner.

3. (Original) The semiconductor device according to claim 1, wherein the protrusion is an inward extension bridging a corner portion.

4. (Currently Amended) ~~[[The]]~~ A semiconductor device ~~according to claim 1,~~

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wherein a plurality of conductive film patterns are formed on the semiconductor substrate, and the conductive film patterns are separated with a certain clearance by
~~provided with~~ a T-shaped groove or a cross-shaped groove ~~for separating the patterns, and~~
a protrusion is formed at a corner of at least one of the conductive film patterns
positioned at a crossing of the respective grooves constituting the T-shaped groove or the
cross-shaped groove, protruding from one corner of the conductive film patterns toward
the groove.

5. (Currently Amended) ~~[[The]]~~ A semiconductor device ~~according to claim 1,~~
wherein ~~[[the]]~~ wirings including a first wiring and a second wiring are formed ~~[[in]]~~
substantially in parallel with a predetermined spacing on the semiconductor substrate, the
second wiring having an end at a point intermediate the length of the first wiring, an end
~~part of the second wiring is positioned along the first wiring, and~~

at least one protrusion is formed at the end ~~[[part]]~~ of the second wiring so as to
protrude from a side of the second wiring toward a side of the first wiring,

or at least one protrusion is formed at a side of the first wiring that faces the end
~~[[part]]~~ of the second wiring so as to protrude toward the second wiring.

6. (Original) The semiconductor device according to claim 1, wherein the
semiconductor substrate is provided further with a bonding pad made of the same film as
the wirings, and the wirings and the bonding pad are coated with an insulating protective

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film having an aperture to expose the bonding pad.

7. (Currently Amended) The semiconductor device according to claim ~~[[1]]~~ 4, wherein the semiconductor substrate is provided further with a bonding pad made of the same film as the conductive patterns, and the patterns and the bonding pad are coated with an insulating protective film having an aperture to expose the bonding pad.

8. (Original) The semiconductor device according to claim 5, wherein the semiconductor substrate is provided further with a bonding pad made of the same film as the first and second wirings, and the wirings and the bonding pad are coated with an insulating protective film having an aperture to expose the bonding pad.

9. (Original) The semiconductor device according to claim 1, wherein the protrusion has an area ranging from $0.2 \mu\text{m}^2$ to $3.0 \mu\text{m}^2$.

10. (Currently Amended) The semiconductor device according to claim 1, wherein an insulating protective film is further provided on the clearance between the wirings ~~or on the conductive film patterns~~, and the insulating protective film is contacted as a whole with the clearance between the wirings or the surface of the wirings ~~conductive film patterns~~.

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11. (Currently Amended) A method of manufacturing a semiconductor device comprising a semiconductor substrate on which a plurality of wirings having corners are formed so that parts of the wirings include corners parallel to each other with a clearance ~~a plurality of wirings or conductive film patterns formed on a clearance between the wirings or on the conductive film patterns on a semiconductor substrate,~~
wherein[[:]] a protrusion is formed at a corner ~~or an end part of at least one of the wirings or the conductive film patterns~~ and the protrusion faces the clearance between the adjacent wirings or the conductive film patterns.

12. (Currently Amended) The method of manufacturing a semiconductor device according to claim 11, wherein the method comprises:

forming, on the semiconductor substrate, a bonding pad made of the same film as the wirings ~~or the conductive film patterns,~~

forming an insulating protective film for covering the wirings, ~~the conductive film patterns~~ and the bonding pad,

forming a patterned photosensitive resin film on the insulating protective film,
and

etching selectively the insulating protective film by using the photosensitive resin film as a mask, thereby forming an aperture in the insulating protective film to expose the bonding pad.

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13. (Original) The method of manufacturing a semiconductor device according to claim 11, wherein the protrusion protrudes outward to the corner.

14. (Original) The method of manufacturing a semiconductor device according to claim 11, wherein the protrusion is an inward extension bridging a corner portion.

15. (Currently Amended) ~~[[The]]~~ A method of manufacturing a semiconductor device ~~according to claim 11~~, wherein ~~[[the]]~~ conductive film patterns are provided with a certain clearance by a T-shaped groove or a cross-shaped groove for separating the patterns, and a protrusion is formed at a corner of at least one of the conductive film patterns positioned at a crossing of the respective grooves constituting the T-shaped groove or the cross-shaped groove, protruding from one corner of the conductive film patterns toward the groove.

16. (Currently Amended) ~~[[The]]~~ A method of manufacturing a semiconductor device ~~according to claim 11~~, wherein ~~[[the]]~~ wirings including a first wiring and a second wiring are formed ~~[[in]]~~ substantially in parallel at a predetermined spacing on the semiconductor substrate, the second wiring having an end at a point intermediate the length of the first wiring, ~~an end part of the second wiring is positioned along the first wiring, and~~

at least one protrusion is formed at the end ~~[[part]]~~ of the second wiring so as to

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protrude from a side of the second wiring toward a side of the first wiring,

or at least one protrusion is formed at a side of the first wiring that faces the end
[[part]] of the second wiring so as to protrude toward the second wiring.

17. (Original) The method of manufacturing a semiconductor device according to claim 11, wherein the protrusion has an area ranging from $0.2 \mu\text{m}^2$ to $3.0 \mu\text{m}^2$.

18. (Currently Amended) The method of manufacturing a semiconductor device according to claim 12, wherein an insulating protective film is further provided on the clearance between the wirings ~~or on the conductive film patterns~~, and the insulating protective film is contacted as a whole with the clearance between the wirings ~~or the surface of the conductive film patterns~~.